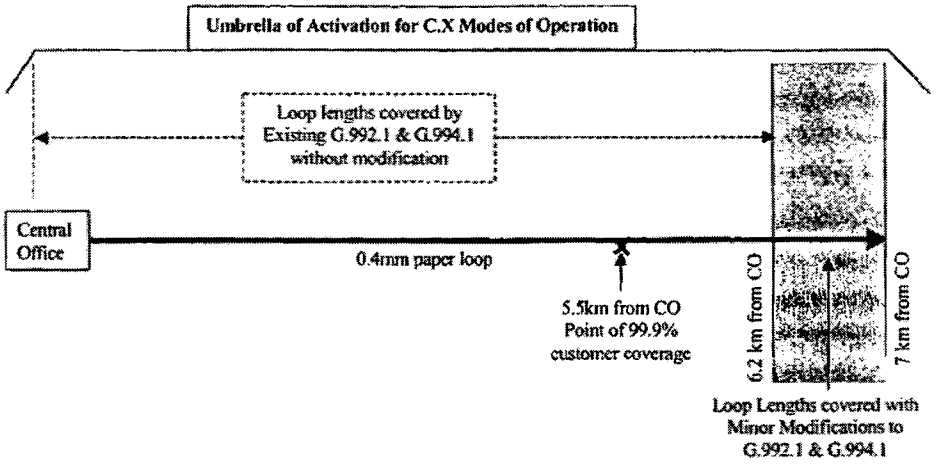
5% kHz; -101.5 ± 5% dBm/Hz at 8500 ± 5% kHz; -103.5 ± 5% dBm/Hz at 8500 ± 5% kHz; and -103.5 ± 5% dBm/Hz at 11040 ± 5% kHz.

## REMARKS

This is a full and timely response to the outstanding non-final Office Action mailed November 30, 2007. The Examiner is thanked for the thorough examination of the present application. Upon entry of this response, claims 1-12 are pending in the present application. The drawings are objected to under 37 CFR 1.83(a). Claims 1-12 are rejected under 35 U.S.C. §102(a) as allegedly being anticipated by the instant application's disclosed prior art. Applicants respectfully request consideration of the following remarks contained herein. Reconsideration and allowance of the application and presently pending claims are respectfully requested.

### I. Response to Drawing Objections

In the Response to Amendment section, the Office Action indicates that Applicants' arguments are not persuasive and maintains the objection to the drawings under 37 CFR 1.83(a). In particular, the Office Action asserts that the implementation of the claimed invention is not shown in the drawings. As noted by the Examiner, the pending claims recite an ADSL system comprising components. Applicants disagree, however, that the apparatus is not shown in the figures. Applicants submit that the claimed embodiments are supported in at least FIG. 2 and the related text. FIG. 2 is reproduced below:




Further, the related text for FIG. 2 states as follows:

> Referring now to FIG. 2, there is shown a block diagram illustrating a deployment guideline for ADSL systems implemented in accordance with the present invention.

(Paragraph 0173).

> With respect to the above the following points are to be noted: the CO operator typically has the sole control of the spectrum management, i.e. if the operator does not wish to operate in overlapped mode on its loops plant, the operator needs only to limit the ATU-C transmitter in the manner set forth in additional detail below.

(Paragraph 0176). The claims are generally directed to "An asynchronous digital subscriber line (ADSL) system comprising: a central office (CO) operator configured to perform spectrum management . . ." Applicants submit that the claimed features are supported by the drawings. Based on the foregoing, Applicants respectfully request that the objection to the drawings be withdrawn.

## II. Response to Claim Rejections Under 35 U.S.C. § 102

It is axiomatic that "[a]nticipation requires the disclosure in a single prior art reference of each element of the claim under consideration." *W. L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1554, 220 USPQ 303, 313 (Fed. Cir. 1983). Therefore, every claimed feature of the claimed invention must be represented in the applied reference to constitute a proper rejection under 35 U.S.C. § 102. Claims 1-12 stand rejected under 35 U.S.C. §102 as allegedly being anticipated by Applicants' disclosed prior art. For at least the reasons set forth below, Applicants respectfully traverse the rejection.

***Background Section***

In rejecting claims 1-12, the Office Action refers to the background section of the present application and specifically to page 4, lines 8-20, reproduced below:

> As a means of controlling symbol transmission, Annex C also affords the ATU-C the capability to disable Bitmap-N.sub.C and Bitmap-$N_R$, thereby disabling the transmission of anything but a pilot tone during the NEXT TTR periods. This mode of transmission is conventionally referred to as FBM (FEXT Bitmapped) transmission. The FBM mode uses the DBM technique to transmit data only during FEXT intervals. Accordingly, the ATU-C transmits only the pilot tone during the $NEXT_R$ symbol. Consequently, the ATU-R disables Bitmap-$N_C$ and does not transmit any signal during the NEXT.sub.C symbol. The ATU-C selects the DBM or FBM mode during G.994.1 handshaking using a "DBM" bit.
>
> Another scenario of interest in the present application is that discussed in Annex A to the G.992.1 Recommendation, requirements for ADSL systems operating in a frequency band above the POTS frequency band. As is understood, in order to avoid interference with existing POTS systems, shifts in the ADSL signal Power Spectral Density (PSD) must be made in particular frequency ranges.

***Independent Claims 1-12***

In rejecting claims 1-12, the Office Action alleges that "*[s]pecific break points of a power density spectral mask are not components of an apparatus or system.*" (Office Action, page 4). Applicants find this assertion to be vague as the Examiner fails to provide a legal basis for rejecting claims 1-12. It appears that the Examiner is not giving patentable weight to the series of break points clearly recited in each of the claims. Applicants submit that the various break points serve to characterize specific PSD masks provided by a central office operator.

As set forth in the summary section for the present application, the present invention overcomes the problems noted in the background section and realizes additional advantages by providing methods and systems for improving ADSL performance and reach within the context of Annex C and/or Annex A of the existing G.992.1 Recommendation. Furthermore, this is achieved without the addition of a new Annex or significant complications to existing equipment or recommendations. Power spectral density (PSD) masks for spectral shaping of an asynchronous digital subscriber line (ADSL) overlap spectrum transmission over a plain old telephone system (POTS) are provided.

Applicants respectfully submit that the series of PSD masks are represented at least in part by the break points and are not taught by the prior art. Furthermore, the background reference fails to disclose the plurality of break points set forth in each of the claims. Applicants respectfully request clarification on why the break points are not given patentable weight by the Examiner. If the Examiner is asserting that the selection of the break points is merely a matter of design choice, Applicants respectfully

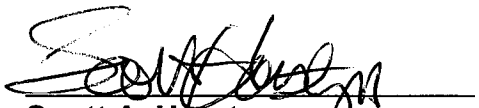
point out that this statement is merely conclusory in nature. As set forth by the Board of Patent Appeals and Interferences, the statement that something is a design choice is a conclusion and not a reason. *Ex Parte Garrett* , 1986, Pat App. Lexus 8 (Bd. Pat. App. Intrf. 1986). Further, the assertion that something is a design choice is insufficient to establish a "suggestion" in the art for the claimed elements. *See e.g., Northern Telecom, Inc. v. Data Point Corp.*, 15 U.S.P.Q. 2d 1321, 1323 (Fed. Cir. 1990). For at least this reason, Applicants respectfully submit that claims 1-12 are patentable over the cited art of record.

## CONCLUSION

Applicants respectfully submit that all pending claims are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested. If, in the opinion of the Examiner, a telephone conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (770) 933-9500.

No fee is believed to be due in connection with this response to Office Action. If, however, any fee is believed to be due, you are hereby authorized to charge any such fee to deposit account No. 20-0778.

Respectfully submitted,



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